

April 11, 2006

Garrett A. Stone, Esquire Brickfield, Burchette and Ritts, P.C. 1025 Thomas Jefferson Street, NW 8th Floor, West Tower Washington, D.C. 20007

Re:

SCPSC Docket No. 2006-1-E

Dear Garrett:

Pursuant to the December 21, 1998 agreement entered into by and between Progress Energy Carolinas, Inc. and Nucor in Docket No. 1999-029-E, enclosed is documentation required by paragraph 1 of that agreement regarding PEC's actual system nuclear capacity factor calculation. As you can see, PEC met the 92.5% goal.

Sincerely,

Len S. Anthony (by dhs)
Len S. Anthony

Deputy General Counsel - Regulatory Affairs

LSA:mhm

Enclosure

cc:

Charles Terreni

Dukes Scott

233282

S. C. PUBLIC SERVICE COMMISSION

ECEIVE

APR 17 2006

ECEIVE

Report to NUCOR STEEL CORPORATION

Of

CP&L Nuclear System Capacity Factor

Pursuant to SCPSC Docket 1999-029-E

Test Period
April 1, 2005
Through
March 31, 2006

Table of Contents

I.	Unadjusted Annual Capacity Factor Calculation	page 1
II.	Capacity Factor Calculation Adjusted for refueling outages only	page 2
III.	Capacity Factor Calculation with Adjustments for all Reasonable Nuclear System Reductions	page 3
IV.	Attachment A Summary of monthly generation and capacity data as reported to the NRC	
V.	Attachment B Summary of generation losses for each unit and totaled for the system	

CP&L Nuclear Capacity Factor Calculation (Unadjusted) April 1, 2005 – March 31, 2006

Net Electrical Generation during the Test Period April 1, 2005 to March 31, 2006 Reported to the NRC and available in the NRC's Public Documents Collection

	MWhs
Brunswick Unit 1	7,116,771
Brunswick Unit 2	7,570,789
Harris Unit 1	7,922,832
Robinson Unit 2	5,781,175
A – Total Net Generation	28,391,567

Unit Maximum Dependable Capacity (MW)
Reported to the NRC and available in the NRC's Public Documents Collection

	April – December 2005	January – March 2006
D 11-11-24	938	938
Brunswick Unit 1	900	937
Brunswick Unit 2	900	900
Harris Unit 1	710	710
Robinson Unit 2		
B – Max Dependable Capacity for 2005	3,448	3.485
C – Max Dependable Capacity for 2006		3,465

Period Hours in the Test Period April 1, 2005 to March 31, 2006

D - Period Hours 4/1/05 to 12/31/05	6,600
E – Period Hours 1/1/06 to 3/31/06	2,160
L - Period Hours III.	

Capacity Factor Formula

$$[(A)/((B \times D) + (C \times E))] = 93.7\%$$

CP&L Nuclear Capacity Factor Calculation Adjusted for Refueling Outages Only and Steam Generator Replacement Outages of 100 Days or Less April 1, 2005 – March 31, 2006

Net Electrical Generation during the Test Period April 1, 2005 to March 31, 2006 Reported to the NRC and available in the NRC's Public Documents Collection

	MWhs
Brunswick Unit 1	7,116,771
Brunswick Unit 2	7,570,789
Harris Unit 1	7,922,832
Robinson Unit 2	5,781,175
Total Net Generation	28,391,567

Refueling outages of 40 days or less and steam generator replacement outages of 100 days or less

	MWh Losses
Brunswick Unit 1	632,243
Brunswick Unit 2	120,375
Harris Unit 1	0
Robinson Unit 2	654,631
Total	1,407,249

A - Total Test Period Net Generation + Adjustment for refueling	29,798,816
outages & steam generator replacement outages	

Unit Maximum Dependable Capacity (MW)
Reported to the NRC and available in the NRC's Public Documents Collection

	April – December 2005	January – March 2006
	938	938
Brunswick Unit 1	900	937
Brunswick Unit 2	900	900
Harris Unit 1	710	710
Robinson Unit 2	3,448	
B - Max Dependable Capacity for 2005	3,448	3,485
C - Max Dependable Capacity for 2006		0,400

Period Hours in the Test Period April 1, 2005 to March 31, 2006

D - Period Hours 4/1/05 to 12/31/05	6,600
E – Period Hours 1/1/06 to 3/31/06	2,160
L = i ellou llouio il illo	

Capacity Factor Formula

 $[(A)/((B \times D) + (C \times E))] = 98.4\%$

Amended SC Fuel Rule Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor ≥ 92.5% during the 12 month period under review. For the test period April 1, 2005 through March 31, 2006, actual period to date performance is summarized below.

> March 31, 2006 Period to Date: April 1, 2005 through

Nuclear System Capacity Factor Calculation (Based on net generation)

Α.	Nuclear system actual generation for SCPSC test period	A = 28,391,567 MWH
<i>L</i> .	114010111111111111111111111111111111111	

B = 8,760 Hrs.Total number of hours during SCPSC test period B.

C = 3,448 MW for 2005Nuclear system MDC during SCPSC test period (see page 2) C. 3,485 MW for 2006

D = 2,665,127 MWHReasonable nuclear system reductions (see page 2) D.

SC Fuel Case nuclear system capacity factor: [(A+D)/(B*C)]*100 = 102.6%E.

NOTE:

If Line Item $E \ge 92.5\%$, presumption of utility's minimum cost operation If Line Item E < 92.5%, utility has burden of proof of reasonable operations

Amended SC Fuel Rule

Nuclear System Capacity Factor Calculation

Reasonable Nuclear System Reductions

Period to Date: April 1, 2005 through March 31, 2006

VI I III I I I I I I I I I I I I I I I	BNP	BNP	HNP	RNP	Nuclear
Nuclear Unit Name and Designation	Unit # 1	Unit # 2	Unit # 1	Unit # <u>2</u>	System *
	938 MW	937 MW	900 MW	710 MW	3,485 MW
Unit MJJC	632,243	120,375	0	654,631	
Dassachla rafiialing outage time (MWH)					
Neasonable retucting burage time (17 17 17)	529,288	443,561	123,651	4,982	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	1	C	C	c	
Descende coast down nower reductions (MWH)	3,4/U	-	···	•	
ivasviladio voast domit pomot accessor	0	47,803	0	26,815	
Doccare the norman acceptain reductions (MWH)					
Neasonable powel ascension reduction (reger)	23.265	51,409	2,321	528	
Duidant NPC required testing ontages (MWH)					
נותכוון וזוכן ובלתווכת נכפווו פי מתופס לידי ובל	0	0	_	0	
SCDSC identified outages not under utility control (MWH)	•				
SOI SO INCHILITY ORINGES HOLD WINES WITH SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	0	785	0	0	
Acts of Nature reductions (MWH)		,			
	0	<u> </u>		-	
Reasonable nuclear reduction due to low system load (MWH)					
	1,188,266	663,933	125,972	956,989	
This total evoluded MWH					
					2,665,127
Total recognitions time exclusions (MWH) [carry to Page 1, Line D]					
1					

• On January 1, 2006 the MDC for Brunswick Unit 2 was increased from 900 MW to 937 MW as a result of power uprate modifications made to the unit. This increase raised the MDC for the Carolina's nuclear fleet from 3,448 MW to 3,485 MW.

ATTACHMENT A

Recorded Generation and Capacity Factors (Test Period April 1, 2005 - March 31, 2006)

Monthly Generation						
Month de M	HOMBNP (BNP2	BNP	FACE OF THE PARTY	MAKERNPARKA	Carolina Fleet
April 2005	469,580	325,616	795,196	663,595	538,546	1,997,337
May 2005	696,777	702,450	1,399,227	577,180	547,235	2,523,642
June 2005	685,161	652,177	1,337,338	654,438	525,379	2,517,155
July 2005	523,889	699,269	1,223,158	670,675	535,730	2,429,563
	567,203	498,867	1,066,070	671,369	533,878	2,271,317
August 2005	682,865	678,636	1,361,501	652,216	273,355	2,287,072
September 2005	<u> </u>	674,195	1,379,973	669,072	90,846	2,139,891
October 2005	705,778	663,284	1,353,048	664,739	542,777	2,560,564
November 2005	689,764		1,335,014	694.577	561,902	2,591,493
December 2005	695,267	639,747				2,677,690
January 2006	712,754	710,483	1,423,237	691,473	562,980	
February 2006	632,000	643,351	1,275,351	624,282	507,683	2,407,316
March 2006	55,733	682,714	738,447	689,216		1,988,527
TOTAL	7,116,771	7,570,789	A STATE OF THE PARTY OF THE PAR	7,922,832	5,781;175	28,391,567

	N	Ionthly Capacity F	actor (Unadjusted)		
100	E PNP1	BNP 2	BNP	HNP	RNP.	Carolina Fleet
MDC:during 2005	938	900	4 1,838 × 4 4	900	710	3,448
MDC during 2006		937	建 401;875 4	900	74.710 .710	3,485
April 2005	69.6%	50.3%	60.2%	102.5%	105.5%	80.6%
	99.8%	104.9%	102.3%	86.2%	103.6%	98.4%
May 2005	101.5%	100.6%	101.1%	101.0%	102.8%	101.4%
June 2005	75.1%	104.4%	89.4%	100.2%	101.4%	94.7%
July 2005	81.3%	74.5%	78.0%	100.3%	101.1%	88.5%
August 2005		104.7%	102.9%	100.7%	53.5%	92.1%
September 2005	101.1%	100.6%	100.8%	99.8%	17.2%	83.3%
October 2005	101.0%		102.2%	102.6%	106.2%	103.1%
November 2005	102.1%	102.4%	97.6%	103.7%	106.4%	101.0%
December 2005	99.6%	95.5%		103.3%	106.6%	103.3%
January 2006	102.1%	101.9%	102.0%	103.2%	106.4%	102.8%
February 2006	100.3%	102.2%	101.2%	102.9%	106.2%	76.7%
March 2006	8.0%	97.9%	52.9%		93.0%	% % 93.7% %
TOTAL	\$	95.1%	90.8%	100.5%	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	American district - 1 and - 1 all outstanding

Year to Date Generation (Unadjusted) BNP 1 BNP 2 BNP											
A STATE OF THE RESIDENCE	BNP1	BNP 2	BNP	HNP.	RNP	Carolina Fleet					
(9): 251 8963 (): 51 Sp. () 115	469,580	325,616	795,196	663,595	530,540	1,997,337					
April 2005	1,166,357	1,028,066	2,194,423	1,240,775	1,085,781	4,520,979					
May 2005		1,680,243	3,531,761	1,895,213	1,611,160	7,038,134					
June 2005	1,851,518		4,754,919		2,146,890	9,467,697					
July 2005	2,375,407	2,379,512		ļ	2,680,768	11,739,014					
August 2005	2,942,610	2,878,379	5,820,989	<u> </u>	2,954,123	14,026,086					
September 2005	3,625,475	3,557,015	7,182,490			16,165,977					
October 2005	4,331,253	4,231,210	8,562,463	4,558,545	3,044,969						
	5,021,017	4,894,494	9,915,511	5,223,284	3,587,746	18,726,541					
November 2005		5,534,241	11,250,525	5,917,861	4,149,648	21,318,034					
December 2005	5,716,284				4,712,628	23,995,724					
January 2006	6,429,038	6,244,724			5,220,311	26,403,040					
February 2006	7,061,038	6,888,075			5,781,175	28,391,567					
March 2006	7,116,771	7,570,789	14,687,560	7,922,832	5,761,175	20,000,000					

Year to Date Capacity Factor (Unadjusted) BNP SHNP SHNP SNP SNP SNP SNP SNP SNP SNP SNP SNP S									
	BNP/14	BNP 2	BNP	SUBSTANTAL PROPERTY OF THE PRO	CALLER	Carolina Fleet.			
	69.6%	50.3%	60.2%	102.5%					
April 2005	85.0%	78.1%	81.6%	94.2%	104.5%	89.6%			
/lay 2005		85.5%	88.0%	96.5%	104.0%	93.5%			
une 2005	90.4%		88.4%	97.4%	103.3%	93.8%			
uly 2005	86.5%	90.3%		98.0%	102.9%	92.7%			
August 2005	85.5%	87.1%	86.3%		94.8%	92.6%			
September 2005	88.0%	90.0%	89.0%	98.4%		91.3%			
	89.9%	91.5%	90.7%	98.6%	83.5%				
October 2005		92.9%	92.1%	99.1%	86.3%	92.7%			
November 2005	91.4%		92.7%	99.6%	88.6%	93.7%			
December 2005	92.3%	93.2%			90.4%	94.7%			
January 2006	93.3%	94.1%	93.7%	100.0%		95.3%			
ebruary 2006	93.9%	94.8%	94.3%	100.3%	91.7%				
March 2006	86.6%	95.1%	90.8%	100.5%	93.0%	93.7%			

ATTACHMENT B

Brunswick Unit 1 April 1, 2005 – March 31, 2006 Test Period MWh Losses by Cause

	Refuel	Repairs	Coast- downs	Power Ascension	Testing	SCPSC	Acts of Nature	Low Load	Total
Apr-05	0	211.759	0	0	0	0	0	0	211,759
May-05	0	14.768	0	0	0	0	0	0	14,768
Jun-05	0	0	0	0	0	0	0	0	0
Jul-05	0	167,669	3,470	0	3,547	0	0	0	174,686
Aug-05	0	131,418	0	0	0	0	0	0	131,418
Sep-05	0	228	0	0	0	0	0	0	228
Oct-05	0	202	0	0	4,131	0	0	0	4,333
Nov-05	0	439	0	0	156	0	0	0	595
Dec-05	0	1.194	0	0	15,431	0	0	0	16,625
Jan-06	0	1,611	0	0	Ö	0	0	0	1,611
Feb-06	0	0	Ö	0	0	0	0	0	0
Mar-06	632,243	Ö	ō	0	0	0	0	0	632,243
Total	632,243	529,288	3,470	0	23,265	0	0	0	1,188,266

Brunswick Unit 2 April 1, 2005 - March 31, 2006 Test Period MWh Losses by Cause

	Refuel	Repairs	Coast- downs	Power Ascension	Testing	SCPSC	Acts of Nature	Low Load	Total
0.05	120 275	152,571	0	47.803	3,755	0	0	0	324,504
Apr-05	120,375			1 0	0	0	0	0	4,654
May-05	0	4,654	0			0	<u> </u>	0	24.034
Jun-05	0	8,775	0	0	15,259		<u> </u>	 	7
Jul-05	0	0	0	0	7	0	0	0	100,010
	0	177,101	0	0	5,118	0	0	0	182,219
Aug-05				 	16	0	785	0	801
Sep-05	0	0	<u> </u>	 	11,390	0	0	0	25,307
Oct-05	0	13,917	0	<u> </u>	11,390	1 - 0 -	0	1 0	16,268
Nov-05	0	16,268	0	0	0	<u> </u>		 	59,571
Dec-05	0	45,054	0	0	14,517	0	0	U	
	0	677	0	0	1.050	0	0	0	1,727
Jan-06				 	156	0	0	0	156
Feb-06	0	0	0	0		1 0	0	0	24,685
Mar-06	0	24,544	0	0	141	<u> </u>		+	= /1000
				47 902	51,409	0	785	1 0	663,933
Total	120,375	443,561	0	47,803	31,403	J	1		L

Harris Unit 1 April 1, 2005 – March 31, 2006 Test Period MWh Losses by Cause

	Refuel	Repairs	Coast- downs	Power Ascension	Testing	SCPSC	Acts of Nature	Low Load	Total
Apr-05	0	0	0	0	0	0	0	0	0
May-05	0	103,018	0	0	898	0	0	0	103,916
Jun-05	0	0	0	0	0	0	0	0	0
Jul-05	0	0	0	0	0	0	0	0	0
Aug-05	0	0	0	0	0	0	0	0	0
Sep-05	0	1,762	0	0	501	0	0	0	2,263
Oct-05	0	16,615	0	0	0	0	0	0	16,615
Nov-05	0	2,256	0	0	0	0	0	0	2,256
Dec-05	0	0	0	Ö	352	0	0	0	352
Jan-06	0	0	0	0	0	0	0	0	0
Feb-06	0	0	0	0	0	0	0	0	0
Mar-06	Ö	0	0	0	570	0	0	0	570
Total	0	123,651	0	0	2,321	0	0	1 0	125,972

Robinson Unit 2 April 1, 2005 - March 31, 2006 Test Period MWh Losses by Cause

	Refuel	Repairs	Coast- downs	Power Ascension	Testing	SCPSC	Acts of Nature	Low Load	Total
Apr-05	0	0	0	0	0	0	0	0	0
May-05	0	3,496	0	0	0	0	0	0	3,496
Jun-05	0	0	0	0	0	0	0	0	0
Jul-05	0	0	0	0	0	0	0	0	0
Aug-05	0	0	0	0	0	0	0	0	0
Sep-05	239,459	0	0	0	528	0	0	0	239,987
Oct-05	415,172	0	0	26,815	0	0	0	0	441,987
Nov-05	0	0	0	0	0	0	0	0	0
Dec-05	0	1,486	0	0	0	0	0	0	1,486
Jan-06	0	0	0	0	0	0	0	0	0
Feb-06	0	0	0	0	0	0	0	0	0
Mar-06	0	0	0	0	0	0	0	0	0
Total	654,631	4,982	0	26,815	528	0	0	0	686,956

PEC Nuclear System Total April 1, 2005 – March 31, 2006 Test Period MWh Losses by Cause

	Refuel	Repairs	Coast- downs	Power Ascension	Testing	SCPSC	Acts of Nature	Low Load	Total
Apr-05	120.375	364,330	0	47.803	3,755	0	0	0	536,263
May-05	0	125,936	0	0	898	0	0	0	126,834
	0	8,775	0	0	15,259	0	0	0	24,034
Jun-05	0	167,669	3,470	1 0	3,554	0	0	0	174,693
Jul-05	0	308.519	0,470	 	5,118	0	0	0	313,637
Aug-05		1,990	0	 	1,045	0	785	0	243,279
Sep-05	239,459		0	26,815	15.521	0	0	0	488,242
Oct-05	415,172	30,734	<u>\</u>	20,013	156	0	0	0	19,119
Nov-05	0	18,963	0	 	30,300	0	0	0	78,034
Dec-05	0	47,734	0	<u> </u>		0	0	- 	3,338
Jan-06	0	2,288	0	0	1,050			1 0	156
Feb-06	0	0	0	0	156	0	0	 	657,498
Mar-06	632,243	24,544	0	0	711	0	0	0	037,490
T - 1 - 1	4 407 240	1,101,482	3,470	74.618	77,523	0	785	0	2,665,127
Total	1,407,249	1,101,462	3,470	1-7,010	77,020	<u> </u>			